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| 10/743,358 | 12/22/2003 | Randy Zimler | BS01098 | 9330 |
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| Scott P. Zimmerman P.O. Box 3822 Cary, NC 27519 | | | EXAMINER LOO, JUENA W | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/743,358

Applicant(s)

ZIMLER ET AL.

Examiner

Juvena W. Loo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 22, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 22, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date April 14, 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

This is in response to application filed on December 22, 2003 in which claims 1 to 16 are presented for examination.

Status of Claims

Claims 1 - 16 are pending, of which claims 1, 9, 15, and 16 are in independent form.

Claims 1 - 16 are rejected under 35 USC 112, second paragraph.

Claims 1 - 3, 5 - 8, and 15 are rejected under 35 USC 102(b).

Claims 9 - 14 and 16 are rejected under 35 USC 102(e).

Claim 4 is rejected under 35 USC 103(a).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 - 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is not clear as to whether the signals transmitted on the first physical medium and the second physical medium are the same or different. Furthermore, it is not clear as to the necessary steps to achieve the sharing of the

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second physical medium with the first physical medium. Therefore, the claim is vague and indefinite.

Regarding claims 2 through 4, they are dependent on claim 1. In addition, it is not clear as to whether signals are transmitted on the first physical medium or the second physical medium as recited above in claim 1.

Regarding claim 5, it is dependent on claim 1. In addition, it is not clear as to whether the signals are transmitted on a combination of different physical medium.

Regarding claim 6, it is dependent on claim 1. In addition, it is not clear as to the necessary steps to achieve the sharing of the multiple physical media.

Regarding claims 7 and 8, they are dependent on claim 1.

Regarding claim 9, it is not clear as to whether the Digital Subscriber Line signals transmitted on the first twisted pair and the second twisted pair are the same or different. Furthermore, it is not clear as to the necessary steps to achieve the sharing of the second twisted pair with the first twisted pair. Therefore, the claim is vague and indefinite.

Regarding claims 10 through 14, they are dependent on claim 9.

Regarding claim 15, it is not clear as to the necessary steps to achieve the sharing of the second physical medium with the first physical medium. Therefore, the claim is vague and indefinite.

Regarding claim 16, it is not clear as to the necessary steps to achieve the sharing among the additional n physical media with the second physical medium and the first physical medium. Therefore, the claim is vague and indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 3, 5 - 8, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Majeti et al. (Patent Number: 5,534,913).

Regarding claim 1, Majeti discloses a method of providing communications services, comprising the steps of: transmitting signals to a destination via a first physical medium (Majeti: Figure 4, 22; column 7, line 38 – 41: the user communicates with the enhanced service provider through the public switched telephone network by a telephone line); and transmitting signals to the destination via a second physical medium (Majeti: column 5, lines 27 – 30: the customer premises equipment is served by a cable television cable carrying RF modulated channels assembled and transmitted by cable television distribution head-end unit), the second physical medium dynamically shared amongst multiple destinations to provide additional bandwidth (Majeti: column 8, line 39 through column 10, line 24: an example of the communication services provided via the two physical media during a information session).

Regarding claim 2, Majeti discloses all the limitations of claim 1. Additionally, Majeti discloses the step of transmitting the signals to the destination comprises transmitting the signals via a twisted pair (Majeti: Figure 4, 22; column 7, line 38 – 41: the user communicates with the enhanced service provider through the public switched telephone network by a telephone line).

Regarding claim 3, Majeti discloses all the limitations of claim 1. Additionally, Majeti discloses the step of transmitting the signals to the destination comprises transmitting the signals via a coaxial cable (Majeti: column 5, lines 27 – 30: the customer premises equipment is served by a cable television cable carrying RF modulated channels assembled and transmitted by cable television distribution head-end unit).

Regarding claim 5, Majeti discloses all the limitation of claim 1. Additionally, Majeti discloses the step of transmitting the signals to the destination comprises transmitting the signals via at least one of i) a combination of a twisted pair and a coaxial cable, ii) a combination of a twisted pair and a fiber optic cable, and iii) a combination of a coaxial cable and a fiber optic cable (Majeti: column 8 line 39 through column 10, line 24: an example of the communication services provided via the two physical media during a information session).

Regarding claim 6, Majeti discloses all the limitations of claim 1. Additionally, Majeti discloses the step of transmitting the signals to the destination via additional physical media, each additional physical media dynamically shared amongst the

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multiple destinations to provide additional bandwidth (Majeti: column 9, lines 45 – 50: bandwidth capacity of each of the data channels is taken into consideration in order to be able to provide efficient routing and control of information sent from the service providers to the user via the cable network).

Regarding claim 7, Majeti discloses all the limitations of claim 1. Additionally, Majeti discloses the step of logically bonding the second physical medium and the first physical medium when transmitting the signals to the destination, such that first physical medium and the second physical medium share the same session of information (Majeti: column 8 line 39 through column 10, line 24: an example of the communication services provided via the two physical media during a information session).

Regarding claim 8, Majeti discloses all the limitations of claim 1. Additionally, Majeti discloses the step of logically bonding n physical media to the first physical medium when transmitting the signals to the destination, such that first physical medium and the n physical media share the same session of information (Majeti: column 8 line 39 through column 10, line 24: an example of the communication services provided via the two physical media during a information session).

Regarding claim 15, Majeti discloses a method of providing communications services, comprising the steps of: receiving a request for communications services from a client communications device (Majeti: column 3, lines 7 - 14: a user or subscriber utilizes a modem connected over the public switched telephone network to transmit requests for information from a service provider); logically bonding a first physical

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medium (Majeti: Figure 4, 22: public switched telephone network connection) and a second physical medium (Majeti: Figure 4, 36: cable connection) to the client communications device (Majeti: Figure 4, 120: customer premise equipment), the second physical medium being dynamically shared amongst multiple client communications devices to provide additional bandwidth when required (Majeti: column 9, lines 25 - 30: bandwidth capacity of each of the data channels is taken into consideration in order to be able to provide efficient routing and control of information sent from the service providers to the user via the cable network); and providing the communications services via the logically bonded first physical medium and the second physical medium (Majeti: column 8, line 39 through column 10, line 24: an example of the communication services provided via the two physical media).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 9 - 14 are rejected under 35 U.S.C. 102(e) as being unpatentable over Joseph et al. (Pub. Number: US 2003/0108063 A1).

Regarding claim 9, Joseph discloses a method of providing communications services, comprising the steps of: transmitting Digital Subscriber Line signals to a destination via a first twisted pair (Joseph: Figure 2, 30b); and transmitting Digital Subscriber Line signals to the destination via a second twisted pair (Joseph: Figure 2, 30c), the second twisted pair shared amongst the destination and another destination, the second twisted pair providing additional bandwidth (Joseph: page 4, section 0050: the system enables multiple DSL lines to be aggregated).

Regarding claim 10, Joseph discloses all the limitations of claim 9. Additionally, Joseph discloses the step of logically bonding the second twisted pair and the first twisted pair when transmitting the digital subscriber signals to the destination, such that first twisted pair and the second twisted pair share the same session of information (Joseph: page 4, section 0050: the system enables multiple DSL lines to be aggregated).

Regarding claim 11, Joseph discloses all the limitations of claim 9. Additionally, Joseph discloses the step of connecting the second twisted pair and the first twisted pair to the destination, such that first twisted pair and the second twisted pair share the same session of information (Joseph: page 4, section 0050: the system enables multiple DSL lines to be aggregated).

Regarding claim 12, Joseph discloses all the limitations of claim 9. Additionally, Joseph discloses the step of transmitting the digital subscriber signals to the destination via a third twisted pair (Figure 2, 30a), the third twisted pair shared amongst the

destination and another destination, the third twisted pair providing additional bandwidth (Joseph: page 4, section 0050: the system enables multiple DSL lines to be aggregated).

Regarding claim 13, Joseph discloses all the limitations of claim 9. Additionally, Joseph discloses the step of instructing a network device to logically bond the second twisted pair and the first twisted pair when transmitting the digital subscriber signals to the destination, such that first twisted pair and the second twisted pair share the same session of information (Joseph: page 4, section 0051: the combination of the premises service unit at the user's site and the service gateway at the integrated service provider (ISP) provide the functionalities required to enable the aggregation of DSL lines).

Regarding claim 14, Joseph discloses all the limitations of claim 9. Additionally, Joseph discloses the step of logically bonding n twisted pairs to the first twisted pair when transmitting the signals to the destination, such that first twisted pair and the n twisted pairs share the same session of information (Joseph: page 4, section 0050: the system enables multiple DSL lines to be aggregated).

7. Claim 16 is rejected under 35 U.S.C. 102(e) as being unpatentable over Pedersen (Pub. Number: US 2004/0062198 A1).

Regarding claim 16, Pedersen discloses a method of providing communications services, comprising the steps of: transmitting signals to a destination via a first physical medium (Pedersen: Figure 1_B, 26 and 30: bonded link interface and link); transmitting

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signals to the destination via a second physical medium, the second physical medium dedicated to provide additional bandwidth (Pedersen: Figure 1_B, 26, 30, and 24: bonded link interface and link and link bonding engine to aggregate physical links into a single logical link); and transmitting signals to the destination via additional n physical media, the n physical media dedicated to provide additional bandwidth (Pedersen: Figure 1_B, 26, 30, and 24; page 3, section 0042: bonded link interface and link and link bonding engine to aggregate physical links into a single logical link).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Majeti et al. (Patent Number: 5,534,913) in view of Gerszberg (Patent Number: US 6,452,923 B1).

Regarding claim 4, Majeti discloses all the limitation of claim 1. However, Majeti fails to teach that the step of transmitting the signals to the destination comprises transmitting the signals via a fiber optic cable. In the same field of endeavor, Gerszberg discloses a system using a hybrid optical fiber and twisted pair and/or coaxial cable for providing services (Gerszberg: column 1, lines 8 – 9). Thus, it would have been

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obvious to one of ordinary skill in the art at the time of the invention to incorporate adding the use of fiber optics cable into the system of Majeti. The motivation would have been in improving the quality of service to users.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juvena W. Loo whose telephone number is (571) 270-1974. The examiner can normally be reached on Mon.-Thurs : 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juvena W Loo
Examiner
Art Unit 2609


FRANTZ COBY
SUPERVISORY PATENT EXAMINER